

# Leadership in Zinc

ANNUAL REPORT

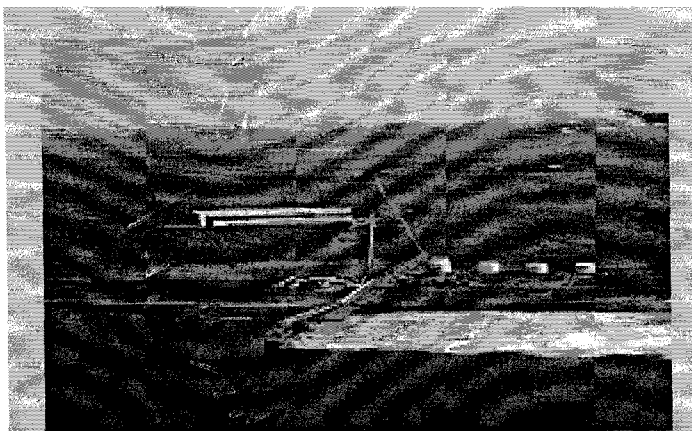
**Cominco**

12 million tonnes grading 18 percent zinc, 5 percent lead and 90 grams of silver per tonne. Importantly, this new zone, called **Aṅarraaq**, shows initial indications of zinc, lead and silver grades that are each slightly higher than the averages for our reported reserves plus resources at the Red Dog centre.

The 1999 exploration program was terminated because of the onset of winter. Follow-up work is planned as soon as weather conditions permit. Further exploration drilling is planned to complete the outlining of the **Aṅarraaq** deposit as well as to search for more deposits in this newly identified centre of mineralization. In addition to the important new discovery at **Aṅarraaq**, the regional exploration program has identified several other attractive drill targets.

In 1999, Cominco Exploration staked claims over approximately 98,000 hectares of state land located in the Red Dog District to increase its holdings to more than 158,000 hectares. These new land holdings, together with the claims already held, offer

significant potential for additional discoveries within the district. The probability for discovering new, high-grade resources in the Red Dog District is high and will likely extend the life of the current mining area beyond 40 years and allow Cominco and NANA to plan for further expansion.



#### EXPORTER OF THE YEAR AWARD

*Red Dog Operations received the Exporter of the Year Award for 1999 from Alaska governor Tony Knowles, acknowledging the successful completion of its expansion program and the mine's ability to deliver higher volumes of concentrates to offshore markets.*

RED DOG				
	1999		1998	
ORE MILLED (tonnes)	2,978,100		2,497,100	
<b>Zinc</b>				
Average ore grade	20.8%		21.0%	
Concentrate (tonnes)	943,500		798,800	
Average concentrate grade	55.2%		55.7%	
Average mill recovery	84%		85%	
<b>Lead</b>				
Average ore grade	5.2%		5.2%	
Concentrate (tonnes)	152,000		122,700	
Average concentrate grade	58.5%		59.3%	
Average mill recovery	59%		57%	
<b>Silver</b>				
Average ore grade (g/tonne)	91.0		90.0	
Average ore grade (oz/ton)	2.65		2.62	
Average mill recovery	70%		67%	
Employees at year-end	389		367	
<b>ORE RESERVES</b>				
	1999		1998	
	Proven & Probable	Possible	Proven & Probable	Possible
Million tonnes	46.4	72.9	47.6	72.9
Zinc %	19.0	13.6	19.2	13.6
Lead %	5.2	3.7	5.2	3.7
Silver g/tonne	101.0	65.0	99.0	65.0
<b>RESOURCES</b>				
	1999		1998	
	Indicated	Inferred	Indicated	Inferred
Million tonnes	9.6	13.0	9.6	13.0
Zinc %	17.8	15.0	17.8	15.0
Lead %	5.5	4.0	5.5	4.0
Silver g/tonne	117.0	90.0	117.0	90.0

### Sullivan Mine

The Sullivan mine at Kimberley experienced a drop in output from 1998 levels due primarily to rock stability problems. These problems occurred as pillar recovery operations proceeded in close proximity to known fault structures. The stress concentrations resulting from the removal of portions of pillars near faults caused poor ground conditions that required time-consuming rehabilitation. Alternative ore sources were used to augment production, but these areas were lower in grade compared with the main pillars.

Sullivan's output of zinc concentrate was 93 percent of 1998 production levels but at the highest concentrate grade ever achieved in the history of the mine.

Despite the higher unit costs, Sullivan concentrates continue to be competitive in comparison to alternative sources of concentrate for the company's Trail Operations. Ore reserve rationalization studies indicate that production of concentrates, albeit from lower grade ore, can be sustained at close to current levels on a competitive basis, through to closure in mid-2002.

Lower output drove unit costs up and resulted in Sullivan reporting a \$16 million operating loss in 1999, the same as that incurred in 1998.

### Trail Smelting and Refining Operations

The company's Trail metallurgical complex is among the largest in the Western world. Its existing production capacity represents 5 percent of Western world refined zinc output and 3 percent of Western world primary lead production. Trail also recovers valuable by-products including silver, gold, indium, germanium, bismuth and copper products from the sulphide concentrates it processes.

Zinc metal production at Trail in 1999 reached a record 288,700 tonnes, primarily as a result of the Kivcet and slag-fuming furnaces achieving stable,

SULLIVAN		
	1999	1998
ORE MILLED (tonnes)	1,730,300	1,915,700
<b>Zinc</b>		
Average ore grade	6.2%	6.0%
Concentrate (tonnes)	174,100	186,900
Average concentrate grade	53.0%	52.5%
Recovery	86%	86%
<b>Lead</b>		
Average ore grade	3.0%	3.5%
Concentrate (tonnes)	56,800	75,300
Average concentrate grade	64.3%	64.9%
Recovery	69%	72%
<b>Silver</b>		
Average ore grade (g/tonne)	16	22
Average ore grade (oz/ton)	0.47	0.65
Employees at year-end	618	638
<b>ORE RESERVES</b>	1999 Proven	1998 Proven & Probable
Million tonnes	4.6	6.1
Zinc %	6.4	6.6
Lead %	3.3	3.7
Silver g/tonne	18.0	20.0

high operating rates so that full advantage could be taken of the integrated nature of Trail's facilities.

Several projects are being undertaken to boost returns at Trail. In addition to yielding production efficiencies, increased volumes and better recoveries for zinc and minor metals, these programs will move the operation toward the goal of making an annual operating profit of \$100 million at a zinc price of US\$0.45.

In a \$12 million project, the previously idled No. 2 slag-fuming furnace was rebuilt in 1999 to process, over four years, 227,000 tonnes of untreated blast furnace slag that accumulated

during the operation of the old lead smelter and during the Kivcet start-up period. The project has a quick payback period as the slag contains significant zinc and other metal values. The furnace was started up in the first week of February 2000.

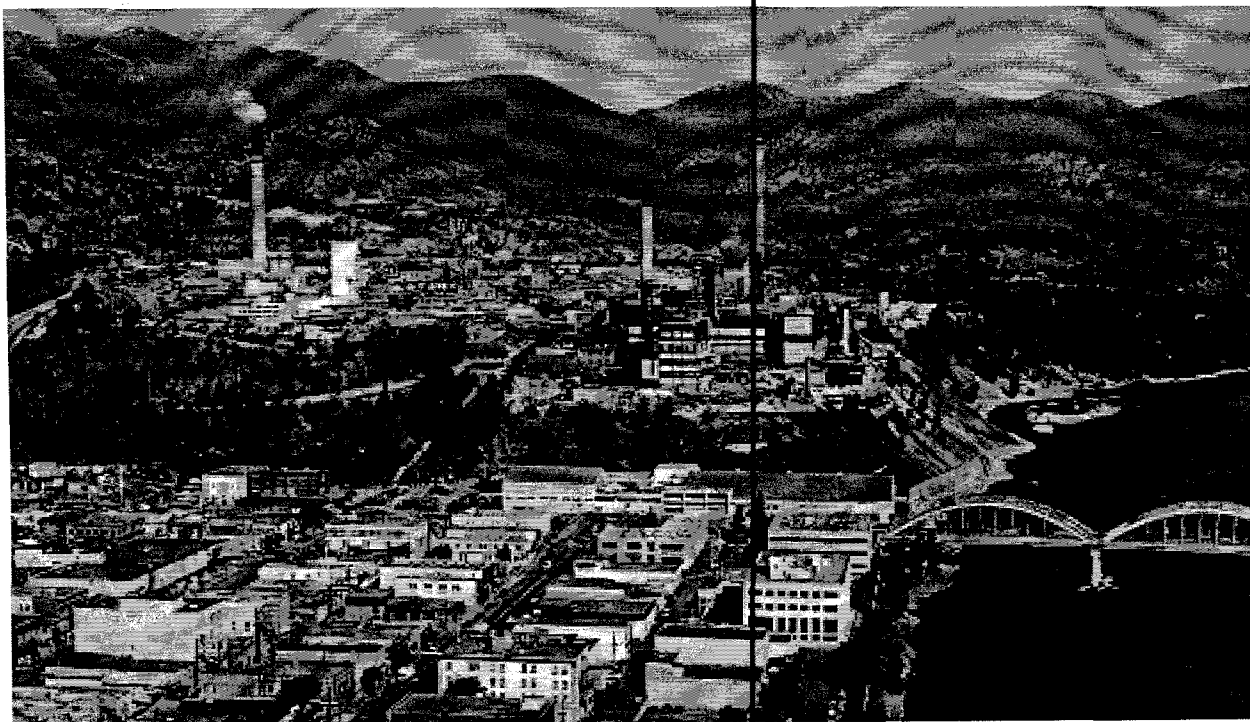
The Kivcet lead smelter and its associated slag-fuming furnace will continue to process the current output of higher-value zinc plant residues and will ultimately consume the 475,000 tonnes of residues that are stockpiled at Trail.

Utilizing Cominco's research, product technology and business development expertise, Trail Operations and the Cominco Marketing and Sales group are pursuing several opportunities to increase the production of high-value specialty metal products.

A new two-year collective agreement was negotiated with two locals of the United Steelworkers at Trail, resulting in improved wages and pension provisions for employees.

Trail contributed \$71 million to Cominco's operating profit in 1999 compared with \$30 million in 1998.

TRAIL		
	1999	1998
<b>Zinc (tonnes)</b>	<b>288,700</b>	274,300
<b>Lead (tonnes)</b>	<b>75,700</b>	63,900
<b>Silver (kilograms)</b>	<b>354,100</b>	379,900
(ounces)	<b>11,382,400</b>	12,215,000
<b>Gold (kilograms)</b>	<b>1,440</b>	2,662
(ounces)	<b>46,300</b>	85,600
<b>Sulphur (tonnes)</b>	<b>35,000</b>	34,600
<b>Sulphur dioxide (tonnes)</b>	<b>52,400</b>	48,800
<b>Sulphuric acid (tonnes)</b>	<b>360,200</b>	354,900
<b>Fertilizers (tonnes)</b>	<b>240,700</b>	273,000
Employees at year-end	<b>1,872</b>	1,884



# Production and Sales Statistics

For the Years Ended December 31		Production		Sales <sup>1</sup>	
		1999	1998	1999	1998
<b>REFINED METALS</b>					
<b>Zinc</b>					
Trail	tonnes	288,700	274,300	287,300	277,500
Cajamarquilla (82%)	tonnes	122,400	113,300	123,600	108,200
<b>Total</b>		<b>411,100</b>	<b>387,600</b>	<b>410,900</b>	<b>385,700</b>
<b>Lead</b>					
Trail	tonnes	75,700	63,900	77,000	62,300
<b>Copper</b>					
Quebrada Blanca (47.25%)	tonnes	34,500	33,600	34,700	34,200
<b>Silver</b>					
Trail	ounces	11,382,400	12,215,000	10,974,500	13,191,700
Highland Valley Copper (50%) <sup>2</sup>	ounces	664,800	1,046,400	768,900	1,025,700
<b>Total</b>		<b>12,047,200</b>	<b>13,261,400</b>	<b>11,743,400</b>	<b>14,217,400</b>
<b>Gold</b>					
Trail	ounces	46,300	85,600	47,500	89,400
Highland Valley Copper (50%) <sup>2</sup>	ounces	4,700	7,000	5,500	7,800
<b>Total</b>		<b>51,000</b>	<b>92,600</b>	<b>53,000</b>	<b>97,200</b>
<b>CONCENTRATES</b>					
<b>Zinc</b>					
Red Dog	tonnes	943,500	798,800	771,400	765,400
Sullivan	tonnes	174,100	186,900	174,100	187,100
Polaris (77.5%)	tonnes	184,800	175,100	179,700	176,400
<b>Total</b>		<b>1,302,400</b>	<b>1,160,800</b>	<b>1,125,200</b>	<b>1,128,900</b>
<b>Lead</b>					
Red Dog	tonnes	152,000	122,700	125,500	123,800
Sullivan	tonnes	56,800	75,300	51,500	35,200
Polaris (77.5%)	tonnes	38,300	37,200	36,000	29,400
<b>Total</b>		<b>247,100</b>	<b>235,200</b>	<b>213,000</b>	<b>188,400</b>
<b>Copper</b>					
Highland Valley Copper (50%) <sup>2</sup>	tonnes	54,800	86,200	63,500	87,100
<b>Molybdenum</b>					
Highland Valley Copper (50%) <sup>2</sup>	tonnes	700	1,200	800	1,200

<sup>1</sup> Sales from Cominco production. <sup>2</sup> Metal contained in concentrate.